

Types of natural capital include:

Provisioning services

- the material output from nature
- e.g. fish, timber, fossil fuels

Regulating services

- indirect benefits from the regulation of natural processes
- e.g. carbon sequestration, air pollution removal, flood prevention

Cultural services

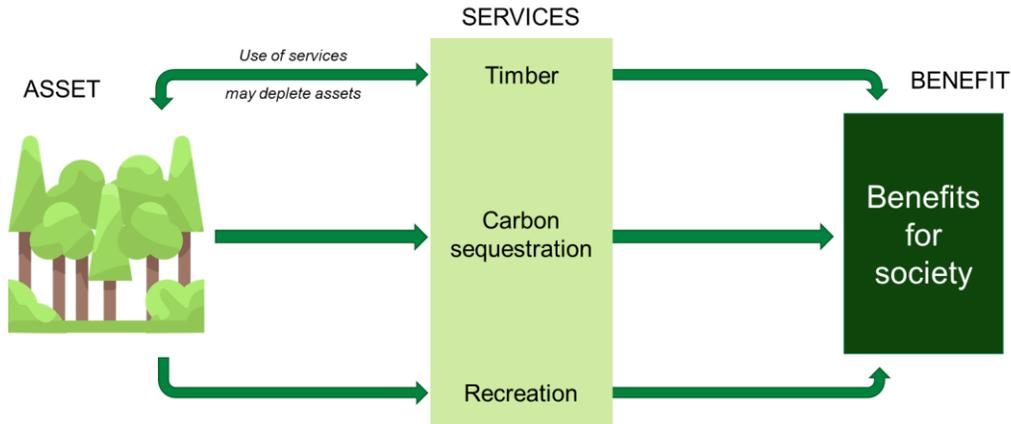
- non-material benefits
- e.g. recreation, aesthetics

Natural capital is the world's stock of natural resources. This includes air, water, minerals and all living things. These natural resources underpin our society and economy because they provide a wide range of benefits (e.g. pollution removal, carbon sequestration, flood management etc.).

Natural capital accounting values goods and services provided by nature, to estimate the benefits which these natural assets provide to humanity (also known as "ecosystem services"). The natural capital accounts are experimental national statistics.

Quantifying benefits provided by nature in the same unit as other accounts (monetary terms), helps decision makers understand the value of natural capital to society and to take that value into account at the same level as other economic factors.

The diagram below shows how an asset such as woodland provides services which benefit society. It is necessary to invest in the maintenance and restoration of assets such as woodland, and society can earn a return through the services provided by these assets.



How are the natural capital accounts calculated?

Natural Capital accounting measures the value of the overall **'stock'** of a natural asset. These are the ecosystem and mineral resources that persist long-term, such as a mountain or a fish population.

From these assets, people receive **'flows'** of services (such as walks on the mountain and fish captured for consumption). The benefits to society of these **'flows'** can then be valued. Each of these 'stocks' and 'flows' is valued according to one of the methods outlined to the right.

The **'asset value'** (often the headline figure) captures all of the quantifiable future annual flows of services that are expected to take place over the lifetime of each natural asset.

Valuation can be done through:

- Market values (where the good is bought and sold).
- Calculated values based on avoided cost.
- Values that people place on certain goods.

2021 Scottish Natural Capital Accounts

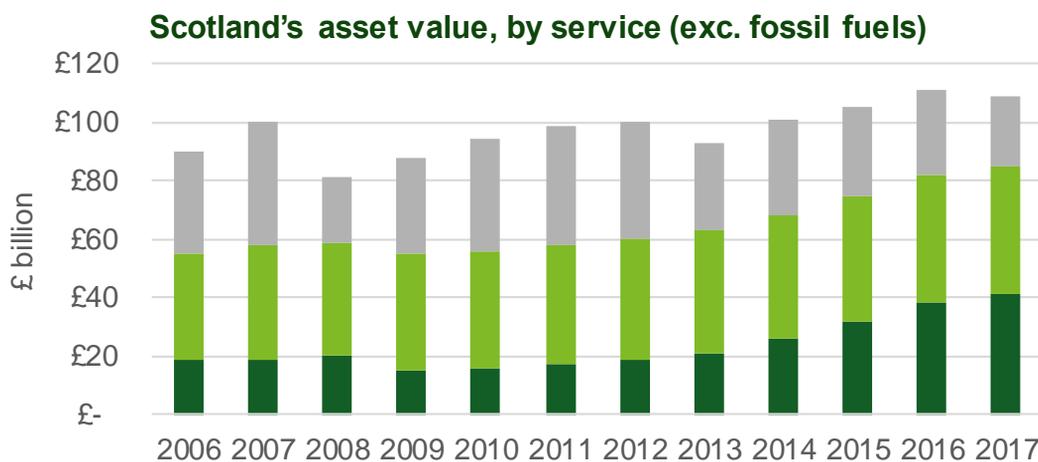
In 2017 Scotland's natural **asset value**, that can currently be estimated, stood at **£156 billion**, 17% of the UK total.

The accounts also give a value to the annual benefits to society that Scotland's natural capital assets provide – the **annual flows**. In 2017 the **annual flow** from Scotland's natural capital stood at **£7 billion**.

Some key results from the accounts include:

- The asset value of regulating and cultural services, which are not directly included in national accounts, amounted to £68 billion in 2017, or 44% of Scotland's total quantified natural capital asset value.
- The largest single service not included in national accounts was carbon sequestration (a regulating service) with an asset value of £42 billion in 2017.
- During 2018, over 1 billion hours were spent on outdoor recreation.
- Scottish renewable energy generation reached 28,236 GWh in 2019, increasing by 743% from 2003, driven largely by growing wind energy provisioning.

Excluding fossil fuels allows a clearer understanding of key parts of Scotland's natural capital, particularly the elements many consider to be the most important. The 2017 **asset value excluding fossil fuels came to £109bn**.



Source: ONS ■ Provisioning Services ■ Regulating Services ■ Cultural Services

Changes to the asset value

The Scottish and UK accounts remain experimental and future publications will be subject to methodological improvements. Changes in methodology can explain some of the changes in values between accounts.

The total asset value has fallen from £191 billion in 2016 to £156 billion in 2017. This decrease is largely due to a fall in the asset value of fossil fuels, driven by a fall in the global price of oil.

55% of the total asset value came from provisioning services. The largest element of this was fossil fuels, which accounted for 30% of the total Scottish asset value in 2017.

Percentage change in 2016 asset values by service because of methodological changes between 2020 and 2021 accounts:

- Fish Capture: +52%
- Water abstraction: +56%
- Minerals: -75%
- Fossil fuels: -12%
- Total: -4%